



## Communities in Bloom

### 2010 Criteria Awards / Special Awards

### Registration Form

|  |  |                                  |
|--|--|----------------------------------|
| <b>Award Submission:</b>                   |  |                                  |
| Urban Forestry (by Tree Canada)            |  |                                  |
| <b>Community (please print):</b>           |  |                                  |
| Edmonton                                   |  |                                  |
| <b>Name of Community Contact:</b>          |  | <b>Position / Title:</b>         |
| Rodney Al                                  |  | Communities in Bloom Coordinator |
| <b>Address</b>                             |  | <b>Province</b>                  |
| 12304-107 Street                           |  | Alberta                          |
|  |  | <b>Postal Code</b>               |
|  |  | T5G 2S7                          |
| <b>Phone</b>                               | <b>Fax</b>   | <b>Cell Phone</b>                |
| (780)496-4678                              | (780)496-4978  | (780)915-5811                    |
| <b>Evening Phone</b>                       | <b>E-mail</b>  | <b>Community Website Address</b> |
| (780)428-7901                              | <a href="mailto:Rodney.al@edmonton.ca">Rodney.al@edmonton.ca</a> | Edmonton.ca/eib                  |
| 2010 Participation Category : Over 300,000 |  |                                  |

Entry material must be submitted to the Communities in Bloom Office at:  
 112 Terry Fox  
 Kirkland, Quebec  
 H9H 4M3  
 Tel: 514.694.8871  
 Attention: Program Coordinator  
 e-mail: [programcoordinator@cib-cef.com](mailto:programcoordinator@cib-cef.com)

Entries will be accepted by mail, or email. Faxed entries are not permitted.

**Completed submissions must be received by 5pm, September 7<sup>th</sup>, 2010.**

*Entries received after that date will not be accepted.*

**Submissions must consist of:**

- Completed registration form (must be attached to each submission).
- 8.5" x 11" typed page (maximum 2 pages) to address criteria as identified for the award.
- Support material which best represents the criteria which could include:
  - o Photos, video clips
  - o Newspaper clippings [photo and print which include the source, date and page];
  - o Newsletters or other community communication documents;
  - o Copy of the related section of the Community Profile Book is acceptable (and recommended);
  - o Copies of promotional materials.

# Criteria

## Urban Forestry

Criteria: Efforts made by the municipality, businesses and institutions, and residents with regards to written policies, by-laws, standards for tree management (selection, planting, and maintenance), long and short-term management plans, tree replacement policies, tree inventory, Integrated Pest Management (IPM), heritage, memorial and commemorative trees.

Entries should address:

- Overall description of how the community demonstrates excellence in urban forestry in the municipality
- Scope of programming and plan of action as distributed throughout the community
- Identification of stakeholder participation and support (municipal, business and institutional, residential, and community groups/organizations/clubs etc.)
- Examples of initiatives improved by or implemented as a result of participation in Communities in Bloom that have made a positive impact on the community


# Edmonton Trees

In a city of over 780,000 residents, Edmonton boasts a vibrant urban forest. Tree planting was introduced to Edmonton in the 1920s by Gladys Reeves, President of the Edmonton Horticultural Society. Since that time, Edmonton has nurtured robust programs to support our urban forest. Beyond the stunning North Saskatchewan River Valley – the largest urban park in North America – Edmonton boasts the largest stand of elm trees in North America *that is not infected by Dutch elm disease*. Almost 300,000 trees thrive on public property – along streets, in neighbourhood parks, beside roadways, and across all civic green space.

Edmonton’s urban forest has been developed with a conscientious understanding that maintenance should reflect land use. Edmonton strives to exhibit well-maintained trees in residential, commercial, and industrial areas. Meanwhile, natural areas demonstrate the cycling of ecosystems to support biodiversity, and naturalization sites (along major thoroughfares) support low-maintenance landscape design.






## Municipal Planning & Civic Management

Over the past several years, City Council and the City of Edmonton have supported the urban forest with a comprehensive system of strategic plans and bylaws to enhance and protect Edmonton’s urban forest. These include civic plans such as The Way Ahead ; The Way We Live ; Urban Parks Management Plan ; and the Capital City Downtown Plan .

The City is currently developing the Urban Forest Management Plan  to be presented to City Council in late 2010.

The Community Standards Bylaw 14600  and Corporate Tree Policy  provide legislative protection for Edmonton’s trees and a framework to increase our overall tree canopy.




## Municipal Services & Programs

The Parks Branch of the City of Edmonton manages the “Urban Forestry” unit consisting of Operations staff  (in-house equipment staffed by certified arborists), Urban Forest Management staff  (tracking and monitoring the tree inventory), Old Man Creek Nursery  (internal sourcing of trees and plant material), Policy and Contracts staff  (seven urban foresters managing external contractors and evaluating tree concerns) and a Principal of Forestry . This Urban Forestry unit also operates various City programs concerning tree issues: collecting funds to the Tree Reserve for damages to and removal of City trees,



Indicates supporting documentation attached

evaluation and approval of new trees, enforcing standards of protection for the urban forest, monitoring for tree pests and disease (especially Dutch elm disease).

In addition, the City operates several programs that engage citizen and corporate involvement: Tree Donation program , Commemorative Tree program , Community League Tree plantings , naturalization plantings , planting on City property , and Woody Plant Trials .

### Community Groups

Many different groups - residents, non-profits, institutions, and industry groups - act as a network to support Edmonton's urban forest. Detailed descriptions about the involvement of these groups is outlined in supporting materials.



Indicates supporting documentation attached

# Supporting Materials

The following materials outline, in greater detail, Edmonton's commitment to healthy trees and a vibrant urban forest.

## Overview

- City of Edmonton – Urban Forestry  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/urban-forestry.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/urban-forestry.aspx)
- “Edmonton Trees” section of 2010 Edmonton in Bloom Directory (attached)

## Official Documents

- The Way Ahead  
[http://www.edmonton.ca/city\\_government/city\\_wide\\_initiatives/strategic-plan-2009-2018.aspx](http://www.edmonton.ca/city_government/city_wide_initiatives/strategic-plan-2009-2018.aspx)
- The Way We Live  
[http://www.edmonton.ca/city\\_government/city\\_wide\\_initiatives/edmontons-people-plan.aspx](http://www.edmonton.ca/city_government/city_wide_initiatives/edmontons-people-plan.aspx)
- Capital City Downtown Plan  
[http://www.edmonton.ca/city\\_government/planning\\_development/capital-city-downtown-plan.aspx](http://www.edmonton.ca/city_government/planning_development/capital-city-downtown-plan.aspx)
- Urban Forest Management Plan
- Community Standards Bylaw 14600  
<http://webdocs.edmonton.ca/Bylaws/C14600.doc>
- Corporate Tree Management Policy C456A  
<http://www.edmonton.ca/environmental/documents/C456A.doc>
  - Guidelines for Evaluation of Trees  
[http://www.edmonton.ca/environmental/documents/tree\\_evaluation\\_guidelines.pdf](http://www.edmonton.ca/environmental/documents/tree_evaluation_guidelines.pdf)
- Design & Construction Standards (Volume 5 – Landscaping)  
[http://www.edmonton.ca/environmental/documents/D\\_and\\_C\\_landscaping.pdf](http://www.edmonton.ca/environmental/documents/D_and_C_landscaping.pdf)
  - Tree Protection – Hoarding Requirements (brochure)  
[http://www.edmonton.ca/environmental/documents/Environment/tree\\_hoarding\\_requirements.pdf](http://www.edmonton.ca/environmental/documents/Environment/tree_hoarding_requirements.pdf)

## Programs / Projects

- Arbor Day in Edmonton  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/arbor-day-in-edmonton.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/arbor-day-in-edmonton.aspx)
- Initiatives by City's Forestry Unit

- [http://www.edmonton.ca/environmental/conservation\\_landscaping/forestry-initiatives.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/forestry-initiatives.aspx)
- Tree Donation program  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/donating-trees-to-the-city.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/donating-trees-to-the-city.aspx)
- Commemorative Tree program  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/commemorative-planting.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/commemorative-planting.aspx)
- Tree Assessment  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/tree-assessment.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/tree-assessment.aspx)
- Tree Planting on Public Property  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/tree-planting-on-public-property.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/tree-planting-on-public-property.aspx)
- Urban Forest Effects Model (UFORE)  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/urban-forest-effects-model.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/urban-forest-effects-model.aspx)
- Trees & Construction  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/trees-construction.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/trees-construction.aspx)
- Naturalization  
[http://www.edmonton.ca/environmental/conservation\\_landscaping/naturalization.aspx](http://www.edmonton.ca/environmental/conservation_landscaping/naturalization.aspx)
- Regional Woody Plant Trials  
[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/opp4045](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/opp4045)

## **Groups & Stakeholders**










- Edmonton Horticultural Society      <http://www.edmontonhort.com/>
- Edmonton Naturalization Group      <http://eng.fanweb.ca/>
- Operation Fruit Rescue Edmonton      <http://ofre.wordpress.com/>
- Protecting Edmonton's Mature Trees (facebook group)  
<http://www.facebook.com/group.php?gid=344279128305>
- Alberta Heritage Tree Foundation  
<http://www.heritagetreefoundation.com/>
- International Society of Arboriculture - Prairie Chapter  
<http://www.isaprairie.com/>
- Society to Prevent Dutch Elm Disease - STOPDED  
[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/prm4494](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/prm4494)
- Tree Canada Foundation      <http://www.treecanada.ca/>
- Society of Municipal Arborists  
<http://www.urban-forestry.com/mc/page.do?sitePageId=38731>

## Edmonton Trees from the **2010 Edmonton in Bloom** Directory

The following pages are segmented from the 2010 EiB Directory (Edmonton's community profile book). Each entry describes the nature and scope of an initiative. Below the description are one or more partners that champion the initiative.

Superscript letters indicate whether partners are from the Public Sector<sup>P</sup>, the Business/For-Profit Sector<sup>B</sup>, or the Community/Non-Profit Sector<sup>C</sup>.

Icons beside each entry show any of the **nine CiB criteria areas** that the initiative contributes to.

-  Tidiness
-  Environmental Responsibility
-  Community Involvement
-  Cultural Heritage
-  Natural Heritage
-  Trees
-  Landscapes
-  Flowers
-  Green Terrain



## Official Documents

### Community Standards Bylaw No. 14600



The Community Standards Bylaw enforces proper care and maintenance of all public and private trees to minimize the spread of Dutch elm disease.

### Corporate Tree Management Policy C456



Protects and preserves trees on *City* property. Only *City* staff or approved arborists can maintain or remove *City* trees. Trees are assessed a monetary value and damages to this green infrastructure are recouped from internal and external parties for replacement of tree canopy. This encourages alternate design and construction methods as an incentive to maintain a mature urban forest.

Appendix: Guidelines for Evaluation of Trees

Outlines criteria for the *City of Edmonton* to value trees on *City* property.

### Urban Forest Management Plan (UFMP)



The *City of Edmonton (Parks-Forestry)* is actively developing an Urban Forest Management Plan. This plan is devised under the Urban Parks Master Plan and will be presented to *City Council* in Winter 2010.

### City of Edmonton Design and Construction Standards



#### Blue book standards for planting and landscaping

Development standards for landscaping and green infrastructure has been developed in collaboration with the planning, architectural, and design community. These standards provide for green space in new developments.

- *City of Edmonton*<sup>P</sup>, *Urban Development Institute*<sup>C</sup>

### Capital City Downtown Plan



This plan identifies trees as a major component of a vibrant urban centre. Edmonton has committed to increasing the downtown urban canopy cover by 20 per cent in the next 10 years.

## Initiatives

### Tree Inventory



There are over 298,000 ornamental trees on *City of Edmonton* property valued at approximately \$1.1 billion. The Tree Inventory maps all public trees with species, size, condition, pruning and maintenance history. It also maps all private elm trees for monitoring of Dutch Elm Disease (DED).

- *City of Edmonton (Parks)*<sup>P</sup>

Edmonton's Elms



The stately elm trees growing throughout Edmonton are a civic treasure. Many mature Neighborhoods feature elm canopy arching over residential streets. With over 70,000 elm trees (public and private), Edmonton has the largest stand of DED-free elm trees in North America.

### DED Prevention



The *City* works with the *Society to Prevent Dutch Elm Disease* for public awareness and proper arboriculture practice. Municipal initiatives include:

- o Receive public inquiries/reports of DED (*311 Edmonton*)
- o Qualified biologists to monitor for DED
- o Annual elm pruning ban between April 1 to September 30
- o Ban on storing and transporting elm wood
- o Increased pruning cycle to reduce the amount of dead wood in trees
- o Elm wood bins at recycling depots to properly dispose of elm wood
- *STOPDED<sup>C</sup>, City of Edmonton (Parks)<sup>P</sup>*

### Tree Pruning & Maintenance



The *City* employs 15 full-time arborists during the pruning season. More than 60% of *City* arborists are Certified Arborists by the *International Society of Arboriculture (ISA)*. The *City* also contracts *ISA* certified tree service companies for additional tree maintenance.

Tree maintenance is done on regular cycles - 4 years for elm trees and 8 years for other tree species. *City* crews also respond to all tree work calls requested by citizens and councilors.

- *City of Edmonton (Parks)<sup>P</sup>*

### Arboriculture Training & Professional Practice



The *City of Edmonton* fosters professional arboriculture practice among forestry staff and contractors. Incentives encourage safe workplace practice, obtaining *ISA* certification, IPM certification and continual training and improvement.

- *City of Edmonton (Parks)<sup>P</sup>, ISA<sup>C</sup>, Society of Municipal Arborists<sup>C</sup>*

### Operation Fruit Rescue Edmonton (O.F.R.E.)



*OFRE* supports food security and urban agriculture by harvesting food in the city. Residents offer fruit trees for harvesting, while volunteers come out to harvest this food. Volunteers get 1/3<sup>rd</sup>, homeowners get 1/3<sup>rd</sup> and the Edmonton Food Bank gets 1/3<sup>rd</sup>. *OFRE* also educates about harvesting and pest management.

- *O.F.R.E.<sup>C</sup>, Edmonton Food Bank<sup>C</sup>*



### University of Alberta Tree Diversity



Long renowned in Edmonton as an unofficial arboretum, the *UofA* grounds are home for 'rare to Edmonton' trees such as amur cork and ginkgo biloba, as well specimen elms and pine. Many of these trees have been identified as 'Heritage Trees' by the *Heritage Tree Foundation of Canada*. These trees acts as a rich learning tool for *UofA*'s Forestry students.

- [UofA](#)<sup>P</sup>

### Protect Edmonton's Mature Trees



Citizens have created a *facebook* group working towards a "Mature Tree" bylaw. The group has grown in popularity and have garnered support of several City Councillors. With growing media attention, mature trees are certainly a hot topic.

- [Protect Edmonton's Mature Trees](#)<sup>C</sup>

### Forestry Policy & Contracts Team



Seven in-house urban foresters manage contracts with external tree service companies, evaluate and valuate trees, provide quality control, and enforce urban forest policies. Personnel are *ISA* certified arborists, hold agriculture or forestry degrees or diplomas, and have a minimum of 3 years experience in the industry.

- [City of Edmonton \(Parks\)](#)<sup>P</sup>

### Annual Tree Health Assessment



Begun in 2001 due to drought conditions, the Annual Tree Health Assessment confirms the health of trees on *City* boulevards, parks, walkways, and buffers. Over four months, 4 qualified personnel inspect for tree health, critical pests and disease. Trees beyond recovery are marked for removal. Crews also collect rain water and insect information.

- [City of Edmonton \(Parks\)](#)<sup>P</sup>

### Replacement Tree Plantings



The City will replace 2000 trees in 2010. Included in this figure are trees funded from compensation for damage to, or removal of, other trees on *City* property.

#### Funding for Drought Replacement Plantings

*City Council* has committed additional funds in 2008 to replace a large portion of trees lost due to drought in 2001 to 2005.

- [City of Edmonton \(Parks\)](#)<sup>P</sup>

### Tree Watering



Newly planted trees and transplanted trees are on specialized watering programs based on their size. This is tracked through the Tree Inventory. \$1.3 million is spent annually on tree watering. (This has tripled since 2000.)

- [City of Edmonton \(Parks\)](#)<sup>P</sup>



### Tree Watering Conservation Research Irrigation Bag Project

This research project assesses the effectiveness of *Ooze Tube*® and *Treegator*® slow release water bags to deliver water to newly planted trees. It is in its final year of evaluation.

### Weeping Tile Irrigation in Centre Medians

The use of underground fabric mesh covered perforated tubing has been used with success in centre medians. PVC pipes are available at the surface to be filled by water trucks every 100m of tubing length.

## Urban Forestry & Infrastructure Renewal



During Neighborhood infrastructure renewal projects (new street lights, sidewalks, streets, etc.), *Parks* staff work cooperatively with contractors to protect and preserve mature trees. Forestry personnel advise on best practices before, during and after development to mitigate damage to trees.

- *City of Edmonton (Parks)*<sup>P</sup>, *City of Edmonton (Transportation)*<sup>P</sup>, *infrastructure contractors*<sup>B</sup>

## Urban Forestry & Light Rail Transit (LRT) Expansion



LRT expansion has been fast tracked to complete west, south, and north lines by 2016. Even though timelines are tight, Transportation has made a commitment to tree protection by choosing paths that have few trees and by incorporating existing trees into the designs.

- *City of Edmonton (Parks)*<sup>P</sup>, *City of Edmonton (Transportation)*<sup>P</sup>, *infrastructure contractors*<sup>B</sup>

## Root Restricting Planting Sites



City testing new methods for increasing and amending soil volumes for trees planted in sites with restricted rooting space. New planting pit designs hold three times more soil than standard sidewalk pits.

- *City of Edmonton (Parks)*<sup>P</sup>, *City of Edmonton (Transportation)*<sup>P</sup>

### The Really Grate Tree Project

Downtown improvement money was allocated to improving the state of the downtown trees. A study to soil test and amend current pits as well as a increased soil volume retrofit project has been funded.

- *City of Edmonton (Parks)*<sup>P</sup> *Downtown Business Association*<sup>B</sup>

## Old Man Creek Nursery (OMCN)



OMCN holds and maintains plant material purchased for projects on *City* sites. Trees are also grown on-site for sale to future *City* projects. Professional nursery practice at OMCN promotes best practice to the local nursery industry.

- *City of Edmonton (Parks)*<sup>P</sup>



### Domestic Phytosanitary Nursery Certification

OMCN is committed to nursery certification. Monitoring and inspection will protect the urban forest by preventing plant pests and disease being distributed through OMCN by plant material.

- *City of Edmonton (Parks)<sup>P</sup>, Canadian Nursery Certification Institute<sup>C</sup>*

### Regional Woody Plant Test Project

This project evaluates woody plants to determine suitability for climate areas of Alberta. Plants are monitored for landscape quality and hardiness over six years.

- *City of Edmonton (Parks)<sup>P</sup>, LANTA<sup>C</sup>, private nurseries<sup>B</sup>*

### Prairie Trial of Rural and Urban Shade Trees (*Prairie TRUST*)

Edmonton joins three others sites on the prairies in an experiment with new shade tree varieties. The goal of the Prairie TRUST is to increase diversity of tree species in the urban forest.

- *Western Nursery Growers Group<sup>B</sup>, City of Edmonton (Parks)<sup>P</sup>*

## Public Education



### Urban Forestry Education Materials

Forestry has created new brochures and distribution materials about tree protection, tree preservation, caring for City trees, and planting on City property. New displays also present urban forest topics for public exhibits.

- *City of Edmonton (Parks)<sup>P</sup>*

### Urban Forestry Presentations

Forestry regularly gives presentations to community groups, other departments, Council to learn about tree management, policies, and working around trees.

- *City of Edmonton (Parks)<sup>P</sup>*

### Alberta Forest Week

Displays and exhibits about trees and forestry.

- *Alberta Sustainable Resource Development<sup>P</sup>, City of Edmonton (Parks)<sup>P</sup>, City of Edmonton (Community Services)<sup>P</sup>*

### Arbor Day celebrations

Events for grade one students in Edmonton celebrating trees and the urban forest. Activities include tree seedlings distributed to all grade one students across Edmonton, classroom visits by arborists, ceremonial tree planting, tree climbing demonstrations, bucket truck and zip-line rides, guided nature walks.

- *LANTA<sup>C</sup>, ISA<sup>C</sup>, Alberta Sustainable Resource Development<sup>P</sup>, Tree Canada<sup>C</sup>, Junior Forest Wardens<sup>C</sup>, Davies Tree Service<sup>B</sup>, City of Edmonton (Parks)<sup>P</sup>*



### Maple Leaf Day

Maple leaf day encourages tree planting throughout Canada September 23. Community leagues will plant a tree in their park to celebrate on Community League Day (September 18<sup>th</sup>).

- *LANTA<sup>C</sup>, ISA<sup>C</sup>, Alberta Sustainable Resource Development<sup>P</sup>, Tree Canada<sup>C</sup>, City of Edmonton (Parks)<sup>P</sup>, community leagues<sup>C</sup>*

### CPTED Assessments & Training



City (Forestry) works with community leagues and EPS to address natural surveillance concerns in public spaces. Recommendations recognize that trees are valuable for creating vibrant public spaces, as part of CPTED actions.

- *City of Edmonton<sup>P</sup>, EPS<sup>P</sup>*

### Community League Plantings



Over-sized trees at OMCN are reserved for community leagues. When leagues cover the cost of moving the trees, the City will provide trees, watering, and on-going maintenance.

- *City of Edmonton (Parks)<sup>P</sup>, community leagues<sup>C</sup>*

### Tree Donation Program



Residents may donate trees from their private property to the City of Edmonton. Acceptable trees are transplanted to public property and donors receive a charitable tax receipt.

- *City of Edmonton (Parks)<sup>P</sup>*

### Commemorative Trees



Citizens fund the costs of a tree, plaque, and future maintenance and replacement to commemorate a person, organization, or event.

- *City of Edmonton (Parks)<sup>P</sup>*

### Heritage Trees of Alberta



A voluntary program in which Edmontonians have nominated trees to the “Heritage Trees of Alberta” book and on-line Tree Registry. This recognizes the historical and landscape value of trees throughout Edmonton and Alberta.

- *Heritage Tree Foundation of Alberta<sup>C</sup>, City of Edmonton (Parks)<sup>P</sup>*

### Networking



#### Prairie Urban Forest Alliance (PUFA)

The *City of Edmonton* participates in this discussion forum about best practices for urban forestry in prairie municipalities.

- *City of Edmonton (Parks)<sup>P</sup>, Prairie Urban Forest Alliance<sup>C</sup>*



### Landscape Alberta Nursery Trades Association (*LANTA*)

The *City of Edmonton* works with the *LANTA Growers Group* on tree standards and best practices of young tree development. Also co-organizes a 2-day tree workshop at the annual *LANTA* Conference.

### International Society of Arboriculture (*ISA*)

Many Forestry employees enjoy annual membership and certification through *ISA*. The *City of Edmonton* also supports private *ISA* certified arborists to do young tree pruning on future public trees in new developments.

## Tree Injection of Pesticides



Certain pesticides are injected into trees, instead of canopy spraying. This method increases the effect of pesticides and reduces runoff and public exposure.

- *City of Edmonton (Parks)*<sup>P</sup>

## Disease Wood Composting Project



Project examines feasibility of composting diseased wood chips instead of landfilling. Involves examining if disease organisms are killed in the process of composting. If successful, composted wood would be used as a soil amendment.

- *UofA*<sup>P</sup>, *City of Edmonton (Parks)*<sup>P</sup>, *City of Edmonton (Waste Management)*<sup>P</sup>

## Study on Road Salt and Tree Health



City of Edmonton worked in collaboration with the UofA to study the impacts of road salt on trees and the use of fungi to mitigate salt stress.

- *City of Edmonton (Parks)*<sup>P</sup>, *City of Edmonton (Transportation)*<sup>P</sup>

## Urban Forest Effects Model (*UFORE*)



Sample plots are surveyed and analyzed to calculate the environmental benefits such as carbon storage and sequestration, energy saving of reduced cooling or heating, reduced storm water run off, pollution removal, etc.

- *City of Edmonton (Parks)*<sup>P</sup>

## STRATUM



Street Tree Resource Analysis Tool for Urban Forest Managers

Allows the Tree Inventory to provide a complete cost/benefit analysis of the urban forest. Stratum provides a means of estimating environmental and asset returns that the urban forest provides (e.g. energy conservation, storm water drainage, increased property value, reduced pollution, and aesthetics).

- *City of Edmonton (Parks)*<sup>P</sup>